AMENDMENTS TO THE CLAIMS

Listing of Claims

This listing of the claims will replace all prior versions, and listings, of claims in this application.

1-2. (Cancelled)

3. (Currently Amended) An isolated nucleic acid molecule selected from the group consisting of: ~~*Corynebacterium glutamicum* nucleic acid molecule selected from the group consisting of those sequences set forth in Appendix A, or a portion thereof, provided that the nucleic acid molecule does not consist of any of the F-designated genes set forth in Table 1.~~

a) an isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:1, or a complement thereof;

b) an isolated nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:2, or a complement thereof;

c) an isolated nucleic acid molecule which encodes a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, or a complement thereof;

d) an isolated nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the entire nucleotide sequence of SEQ ID NO:1, or a complement thereof;

e) an isolated nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to the entire nucleotide sequence of SEQ ID NO:1, or a complement thereof;

f) an isolated nucleic acid molecule consisting of a fragment of at least 15 contiguous nucleotides of the nucleotide sequence of SEQ ID NO:1, or a complement thereof;

g) an isolated nucleic acid molecule comprising a fragment of at least 15 contiguous nucleotides of the nucleotide sequence of SEQ ID NO:1, wherein the nucleic acid molecule encodes a polypeptide having a UDP-N-Acetylmuramate-Alanine-Ligase activity, or a complement thereof;

h) an isolated nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence which is at least 90% identical to the entire amino acid sequence of SEQ ID NO:2, or a complement thereof;

i) an isolated nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence which is at least 95% identical to the entire amino acid sequence of SEQ ID NO:2, or a complement thereof; and

j) an isolated nucleic acid molecule which hybridizes to the complement of the nucleotide sequence of SEQ ID NO:1 in 6X sodium chloride/sodium citrate (SSC) at 65°C, or a complement thereof.

4-8. (Cancelled)

9. (Currently Amended) An isolated nucleic acid molecule comprising the nucleic acid molecule of claim 3 ~~1 or a portion thereof~~ and a nucleotide sequence encoding a heterologous polypeptide.

10. (Currently Amended) A vector comprising the nucleic acid molecule of claim 3 or 9[[1]].

11. (Original) The vector of claim 10, which is an expression vector.

12. (Original) A host cell transfected with the expression vector of claim 11.

13. (Original) The host cell of claim 12, wherein said cell is a microorganism.

14. (Original) The host cell of claim 13, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium.*

15. (Original) The host cell of claim 12, wherein the expression of said nucleic acid molecule results in the modulation in production of a fine chemical from said cell.

16. (Original) The host cell of claim 15, wherein said fine chemical is selected from the group consisting of: organic acids, proteinogenic and nonproteinogenic amino acids, purine and pyrimidine bases, nucleosides, nucleotides, lipids, saturated and unsaturated fatty acids, diols, carbohydrates, aromatic compounds, vitamins, cofactors, polyketides, and enzymes.

17. (Original) A method of producing a polypeptide comprising culturing the host cell of claim 12 in an appropriate culture medium to, thereby, produce the polypeptide.

18-24. (Cancelled)

25. (Currently Amended) A method for producing a fine chemical, comprising culturing [[a]]the cell ~~containing a vector~~ of claim 12 such that the fine chemical is produced.

26. (Original) The method of claim 25, wherein said method further comprises the step of recovering the fine chemical from said culture.

27. (Cancelled)

28. (Original) The method of claim 25, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium.*

29. (Original) The method of claim 25, wherein said cell is selected from the group consisting of: *Corynebacterium glutamicum, Corynebacterium herculis, Corynebacterium lilium, Corynebacterium acetoacidophilum, Corynebacterium acetoglutamicum, Corynebacterium acetophilum, Corynebacterium ammoniagenes, Corynebacterium fujiokense, Corynebacterium nitrilophilus, Brevibacterium ammoniagenes, Brevibacterium butanicum, Brevibacterium divaricatum, Brevibacterium flavum, Brevibacterium healii, Brevibacterium ketoglutamicum, Brevibacterium ketosoreductum, Brevibacterium lactofermentum, Brevibacterium linens, Brevibacterium paraffinolyticum,* and those strains set forth in Table 3.

30. (Original) The method of claim 25, wherein expression of the nucleic acid molecule from said vector results in modulation of production of said fine chemical.

31. (Original) The method of claim 25, wherein said fine chemical is selected from the group consisting of: organic acids, proteinogenic and nonproteinogenic amino acids, purine and pyrimidine bases, nucleosides, nucleotides, lipids, saturated and unsaturated fatty acids, diols, carbohydrates, aromatic compounds, vitamins, cofactors, polyketides and enzymes.

32. (Original) The method of claim 25, wherein said fine chemical is an amino acid.

33. (Currently Amended) The method of claim 32, wherein said amino acid is ~~drawn~~ selected from the group consisting of: lysine, glutamate, glutamine, alanine, aspartate, glycine, serine, threonine, methionine, cysteine, valine, leucine, isoleucine, arginine, proline, histidine, tyrosine, phenylalanine, and tryptophan.

34. (Currently Amended) A method for producing a fine chemical, comprising culturing a cell whose genomic DNA has been altered by the inclusion of a nucleic acid molecule of claim 3 or 9~~any one of claims 1-9~~.

35. (Withdrawn) A method for diagnosing the presence or activity of *Corynebacterium diphtheriae* in a subject, comprising detecting the presence or activity of the nucleic acid molecule of claim 3~~one or more of the sequences set forth in Appendix A or Appendix B in the subject, provided that the sequences are not or are not encoded by any of the F-designated sequences set forth in Table 1~~, thereby diagnosing the presence or activity of *Corynebacterium diphtheriae* in the subject.

36. (Currently Amended) A host cell comprising a nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:1~~selected from the group consisting of the nucleic acid molecules set forth in Appendix A~~, wherein the nucleic acid molecule is disrupted.

37. (Currently Amended) A host cell comprising a nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:1~~selected from the group consisting of the nucleic acid molecules set forth in Appendix A~~, wherein the nucleic acid molecule comprises one or more nucleic acid modifications as compared to the nucleotide sequence of SEQ ID NO:1~~from the sequence set forth in Appendix A~~.

38. (Currently Amended) A host cell comprising a nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:1~~selected from the group consisting of the nucleic acid molecules set forth in Appendix A~~, wherein the regulatory region of the nucleic acid molecule is modified relative to the wild-type regulatory region of the molecule.